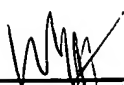




# UNITED STATES PATENT AND TRADEMARK OFFICE

  
UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/535,435

05/05/2005

Masoud Bassiri

212/740US

6157

23371

7590

07/31/2006

CROCKETT & CROCKETT  
24012 CALLE DE LA PLATA  
SUITE 400  
LAGUNA HILLS, CA 92653

EXAMINER

WENDELL, ANDREW

ART UNIT

PAPER NUMBER

2618

DATE MAILED: 07/31/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/535,435	<b>Applicant(s)</b> BASSIRI ET AL.	
	<b>Examiner</b> Andrew Wendell	<b>Art Unit</b> 2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☐ Responsive to communication(s) filed on 05 May 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1. Claims 1-2 and 9-10 are rejected under 35 U.S.C. 102(e) as being anticipated by Masuda et al. (US Pat Appl# 2004/0203911).

Regarding claim 1, Masuda et al. wireless communication restriction device, repeater and base station teaches at least one gateway antenna 431 (Fig. 4 and Section 0060) arranged at an entrance point of the enclosed environment so as to radiate downlink RF signals into and receive uplink RF signals from, the enclosed environment 100 (Fig. 4), respectively; at least one auxiliary repeater 410 (Fig. 4) arranged within the enclosed environment 100 (Fig. 4); a donor antenna 111 (Fig. 4) coupled to the auxiliary repeater; and a server antenna 312 (Fig. 4) coupled to the auxiliary repeater; wherein the auxiliary repeater relays the downlink 450 and 460 (Fig. 4) and uplink 360 and 451 (Fig. 4) RF signals using the donor antenna and the server antenna.

Regarding claim 2, Masuda et al. teaches wherein the auxiliary repeater 410 (Fig. 4) is mounted on a mobile conveyance movable in the enclosed environment 100 (Fig. 4) with the donor antenna 111 (Fig. 4) located outside the mobile conveyance and the server antenna 312 (Fig. 4) located inside the mobile conveyance.

Regarding claim 9, Masuda et al. teaches a first interface 430 (Fig. 4) that is coupled to a control station for converting downlink control data 450 (Fig. 4) into corresponding downlink control RF signals and for converting uplink signaling RF signals (to 440, Fig. 4) into corresponding uplink signaling data; a first combiner/decombiner that is coupled to the first interface for combining the downlink RF signals 450 (Fig. 4) with the downlink control RF signals for transmission by the gateway antenna 431 (Fig. 4), and for separating uplink RF signals from the uplink signaling RF signals (to 440, Fig. 4) received by the gateway antenna 431 (Fig. 4); a second interface 410 (Fig. 4) that is coupled to a signaling and driving system for converting the downlink control RF signals 460 (Fig. 4) into driver signals and for converting signaling signals into the uplink signaling RF signals 451 (Fig. 4); and a second combiner/decombiner that is coupled to the second interface 410 (Fig. 4) for combining the uplink RF signals 451 (Fig. 4) with the uplink signaling RF signals for transmission by the donor antenna 111 (Fig. 4) of the auxiliary repeater 410 (Fig. 4), and for separating the downlink RF signals 460 (Fig. 4) from the downlink control RF signals received by the donor antenna 111 (Fig. 4) of the auxiliary repeater 410 (Fig. 4).

Regarding claim 10, Masuda et al. teaches wherein the signaling and driving system is arranged in the mobile conveyance and comprises a driver for controlling the mobile conveyance based on the driver signals, and a sensor for producing the signaling signals based on a status of the mobile conveyance (Section 0020).

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 3 and 11-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Masuda et al. (US Pat Appl# 2004/0203911) in view of Moriya et al. (US Pat# 6,108,535).

Regarding claim 3, Masuda et al. wireless communication restriction device, repeater and base station teaches the limitations in claims 1 and 2. Masuda et al. fails to teach a lift shaft and car.

Moriya et al. mobile communication system including service management of traffic machines teaches wherein the enclosed environment is in a lift shaft 37 (Fig. 11), the mobile conveyance is a lift car 34 (Fig. 11) and the gateway antenna 7A (Fig. 11) is arranged at a ceiling of the lift shaft.

Therefore it would have been obvious at the time the invention was made to incorporate a lift shaft and car as taught by Moriya et al. into Masuda et al. wireless communication restriction device, repeater and base station in order to reduce user's operation and waiting time (Col. 3 lines 3-10).

Regarding claim 11, the combination including Moriya et al. teaches wherein the signaling and driving system further comprises a signal generator 31, 32, and 36 (Fig. 11) being operable by an operator 11 (Fig. 11) of the mobile conveyance 34 (Fig. 11).

Regarding claim 12, Masuda et al. teaches at least one gateway antenna 431 (Fig. 4) arranged to radiate downlink RF signals 450 (Fig. 4) into and receive uplink RF signals 451 (Fig. 4) from inside, the shaft 100 (Fig. 4), respectively; an auxiliary repeater 410 (Fig. 4) mounted on the car 100 (Fig. 4); a donor antenna 111 (Fig. 4) coupled to the auxiliary repeater 410 (Fig. 4) and located outside of the car 100 (Fig. 4); and a server antenna 312 (Fig. 4) coupled to the auxiliary repeater 410 (Fig. 4) and located inside the car 100 (Fig. 4); wherein the auxiliary repeater 410 (Fig. 4) relays the uplink 360 and 451 (Fig. 4) and downlink RF signals 450 and 460 (Fig. 4) between outside and inside of the car 100 (Fig. 4) using the donor antenna 111 (Fig. 4) and the server antenna 312 (Fig. 4). Masuda et al. fails to teach a lift shaft, a lift car, and a gateway antenna arranged at a ceiling of the lift shaft.

Moriya et al. teaches a lift shaft 37 (Fig. 11); a lift car 34 (Fig. 11) that is moveable within the lift shaft 37 (Fig. 11); at least one gateway antenna 7A (Fig. 11) arranged at a ceiling of the lift shaft 37 (Fig. 11) so as to radiate downlink RF signals into and receive uplink RF signals from inside, the lift shaft, respectively (Col. 13 line 53-Col. 14 line 19).

Regarding claim 13, Masuda et al. teaches a first interface 430 (Fig. 4) that is coupled to a control station for converting downlink control data 450 (Fig. 4) into corresponding downlink control RF signals and for converting uplink signaling RF signals (to 440, Fig. 4) into corresponding uplink signaling data; a first combiner/decombiner that is coupled to the first interface for combining the downlink RF signals 450 (Fig. 4) with the downlink control RF signals for transmission by the

Art Unit: 2618

gateway antenna 431 (Fig. 4), and for separating uplink RF signals from the uplink signaling RF signals (to 440, Fig. 4) received by the gateway antenna 431 (Fig. 4); a second interface 410 (Fig. 4) that is coupled to a signaling and driving system for converting the downlink control RF signals 460 (Fig. 4) into driver signals and for converting signaling signals into the uplink signaling RF signals 451 (Fig. 4); and a second combiner/decombiner that is coupled to the second interface 410 (Fig. 4) for combining the uplink RF signals 451 (Fig. 4) with the uplink signaling RF signals for transmission by the donor antenna 111 (Fig. 4) of the auxiliary repeater 410 (Fig. 4), and for separating the downlink RF signals 460 (Fig. 4) from the downlink control RF signals received by the donor antenna 111 (Fig. 4) of the auxiliary repeater 410 (Fig. 4).

Regarding claim 14, the combination including Moriya et al. teaches wherein the signaling and driving system is arranged in the lift car 34 (Fig. 11) and comprises a driver 31 and 32 (Fig. 11) for controlling the lift car 34 (Fig. 11) based on the driver signals, and a sensor 32 (Fig. 11) for producing the signaling signals based on the status of the lift car.

Regarding claim 15, the combination including Moriya et al. teaches wherein the signaling and driving system further comprises a signal generator being operable by a user 11 (Fig. 11) of the lift car 37 (Fig. 11).

4. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Masuda et al. (US Pat Appl# 2004/0203911) in view of Shields (US Pat# 6,701,157).

Regarding claim 4, Masuda et al. wireless communication restriction device, repeater and base station teaches the limitations in claims 1 and 2. Masuda et al. fails to teach adjustable gain based on distance.

Shields transmitter circuit architecture teaches an amplifier having a gain that is adjustable based on a distance between the mobile conveyance and the gateway antenna (Col. 2 lines 61-67).

Therefore it would have been obvious at the time the invention was made to incorporate adjustable gain based on distance as taught by Shields into Masuda et al. wireless communication restriction device, repeater and base station in order to allow a maximum number of remote stations to communicate with the base station (Col. 3 lines 40-43).

5. Claims 5-8 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Masuda et al. (US Pat Appl# 2004/0203911) in view of Yarkosky (US Pat# 6,895,218).

Regarding claim 5, Masuda et al. wireless communication restriction device, repeater and base station teaches the limitations in claim 1. Masuda et al. fails to teach auxiliary repeaters arranged in cascade.

Yarkosky's in-building distribution using wireless access technology teaches a plurality of auxiliary repeaters 358, 362, and 366 (Fig. 8) arranged spaced apart from each other in a cascade within the enclosed environment 354 (Fig. 8).

Therefore it would have been obvious at the time the invention was made to incorporate auxiliary repeaters arranged in cascade as taught by Yarkosky into



Art Unit: 2618

Masuda et al. wireless communication restriction device, repeater and base station in order to lower costs and reduce cabling (Col. 2 lines 28-36).

Regarding claim 6, Masuda et al. teaches wherein the auxiliary repeater 410 (Fig. 4) in the first group are mounted (Section 0056) to respective mobile conveyances 100 (Fig. 4) of a train of mobile conveyances (Fig. 4) movable in the enclosed environment, with the donor antenna 111 (Fig. 4), coupled to at least a leading auxiliary repeater 410 (Fig. 4) or a trailing auxiliary repeater of the auxiliary repeater in the first group, being arranged outside the mobile conveyance (Fig. 4), the donor antennas coupled to the other auxiliary repeater in the first group and the server antennas 112 (Fig. 2) coupled to the auxiliary repeater 110 (Fig. 2) in the first group arranged inside the respective mobile conveyance 100 (Fig. 2). Masuda et al. fails to teach a first and second group of auxiliary repeaters and the second group of repeaters arranged to be outside.

Yarkosky teaches a first 352 and 358 (Fig. 8) and second group 362 and 366 (Fig. 8) of auxiliary repeaters, and the second group of repeater 352 (Fig. 8) arranged to be outside 354 (Fig. 8).

Regarding claim 7, the combination including Masuda et al. teaches wherein the enclosed environment is the inside of a tunnel (Section 0060).

Regarding claim 8, the combination including Yarkosky teaches a plurality of antennas 358, 362, and 366 (Fig. 8) arranged at respective entrance points of the enclosed environment 354 (Fig. 8).

Regarding claim 18, the combination including Masuda et al. teaches wherein the enclosed environment is the inside of a tunnel (Section 0060).

6. Claims 16-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Masuda et al. (US Pat Appl# 2004/0203911) in view of Moriya et al. (US Pat# 6,108,535) and further in view of Shields (US Pat# 6,701,157).

Regarding claim 16, Masuda et al. wireless communication restriction device, repeater and base station in view of Moriya et al. mobile communication system including service management of traffic machines teaches the limitations in claims 12-15. Moriya et al. teaches wherein the sensor 32 (Fig. 11) is adapted to provide information about the location of the lift car within the lift shaft, and to the first interface so that the information can be used by the control station to control the location of the lift car 34 (Fig. 11) in the lift shaft 37 (Fig. 11). Masuda et al. and Moriya et al. fails to teach controlling the gain of an amplifier of a repeater.

Shields transmitter circuit architecture teaches controlling the gain of an amplifier of a repeater (Col. 2 lines 61-67).

Therefore it would have been obvious at the time the invention was made to incorporate controlling the gain of an amplifier of a repeater as taught by Shields into a lift shaft and car as taught by Moriya et al. into Masuda et al. wireless communication restriction device, repeater and base station in order to allow a maximum number of remote stations to communicate with the base station (Col. 3 lines 40-43).

Art Unit: 2618

Regarding claim 17, Shields further teaches a amplifier having a gain that is adjustable based on a distance between the mobile conveyance and the gateway antenna (Col. 2 lines 61-67).

### **Conclusion**

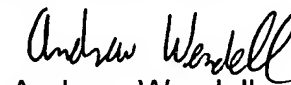
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew Wendell whose telephone number is 571-272-0557. The examiner can normally be reached on 7:30-5 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nay Maung can be reached on 571-272-7882. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
QUOCHIEN B. VUONG  
PRIMARY EXAMINER

7/21/2006

  
Andrew Wendell  
Examiner  
Art Unit 2618